

Revised
Traffic Impact Analysis
McDaniel St Apts

McMinnville, Oregon

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completed with
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McDaniel St Apartments

McMinnville, Oregon



Introduction:

McDaniel St Apartments are in preliminary planning stages for development in McMinnville, Oregon. Located west of the McDaniel St south of 17th St, the project will include 24 apartment units. The intent of this analysis is to estimate the impact traffic from the planned apartments will have on the transportation system in the City of McMinnville and to recommend improvements to the transportation system if appropriate. This analysis is intended to provide information needed to change the zoning from Light Industrial (M-1) to Multiple Family Residential (R-4) and for approval of the construction of the planned apartments.



Figure 1 - Aerial View of Site

Residents of McDaniel St Apartments will use the City of McMinnville transportation system and add traffic to the roadways. This analysis will consider the traffic impacts at the intersections of:

- McDaniel St at 19th St
- McDaniel St at 18th St
- McDaniel St at 17th St
- McDaniel St at Lafayette Ave
- McDaniel St Apts Access

Summary of Findings:

The development of 24 units will generate an estimated 15 trips in the AM Peak hour and 18 trips in the PM Peak hour. Residents will use the streets in the City of McMinnville transportation system adding additional traffic to the system. Traffic from the planned apartments will affect performance metrics at the studied intersections. All of the studied intersections will perform within accepted performance standards in the City of McMinnville (LOS A, B, C or D) with the expected traffic from the apartments.

There is and this study will assume continued storage for 2 vehicles wanting to use two stage gap acceptance to turn left from McDaniel at Lafayette (EBLT). There were 2 vehicles making the left turn in

the AM and PM Peak hour periods. These turns are the most difficult turns to make and the City should continue monitoring the intersection during peak hours to assure left turns can be made safely, consider restriping the two stage gap acceptance refuge and/or restrict the intersection to right out only from McDaniel St.

History and Existing Conditions:

The project site is tax lot 7100 of tax map 4S 4W Sec 16DB and includes 1 acre. It is anticipated that construction will begin in 2018. The site is currently zoned Light Industrial (M-1) to. The developer is requesting the zoning be changed to Multiple Family Residential (R-4) in order that 24 apartments can be built on the parcel. This study will assume that 24 apartments are being built.

Crash data was provided by ODOT for the studied intersections for the 5 year period including 2011 through 2015. There were 3 reported injury crashes and 9 property damage crashes at the 4 studied intersections in the analyzed time period. There were no fatal crashes.

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	McDaniel at 19th St	All-way stop	HCM 6th Edition	SB Thru	0.274	9.0	A
2	McDaniel at 18th St	Two-way stop	HCM 6th Edition	EB Thru	0.026	11.5	B
3	McDaniel at 17th St	Two-way stop	HCM 6th Edition	EB Left	0.018	10.6	B
4	McDaniel at Lafayette	Two-way stop	HCM 6th Edition	SEB Left	0.005	15.1	C

Existing AM Peak Hour Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	McDaniel at 19th St	All-way stop	HCM 6th Edition	NB Thru	0.240	8.9	A
2	McDaniel at 18th St	Two-way stop	HCM 6th Edition	WB Thru	0.025	11.8	B
3	McDaniel at 17th St	Two-way stop	HCM 6th Edition	EB Left	0.016	10.9	B
4	McDaniel at Lafayette	Two-way stop	HCM 6th Edition	SEB Left	0.007	22.2	C

Existing PM Peak Hour Summary

Figure 2 - Existing Traffic Conditions

The studied intersection are functioning at less than 28% of capacity ($v/c < 0.280$) and LOS C or better.

Crash Data provided by ODOT Crash Data Unit does not show an unusually high number of crashes at the studied intersections. There do not appear to be significant changes needed at the intersections for safety reasons.

Intersection	Fatal Crashes	Injury Only	Property Damage Only	Total
• McDaniel St at 19th St	0	0	3	3
• McDaniel St at 18th St	0	1	2	3
• McDaniel St at 17th St	0	0	0	0
• McDaniel St at Lafayette Ave	0	2	4	6
Total	0	3	9	12

Figure 3 – 2011 to 2105 ODOT Crash Data

Traffic Conditions when the McDaniel St Apts are occupied:

This analysis will assume that 30% of the traffic from the apartments will travel to and from the north on McDaniel St and 70% will travel to and from the south on McDaniel St. This study will also assume that other traffic will grow at 1.13% each year through 2038. It assumes EBLT's use 2 stage gap acceptance at the McDaniel at Lafayette

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	McDaniel at 19th St	All-way stop	HCM 6th Edition	SB Thru	0.275	9.0	A
2	McDaniel at 18th St	Two-way stop	HCM 6th Edition	EB Thru	0.026	11.5	B
3	McDaniel at 17th St	Two-way stop	HCM 6th Edition	EB Left	0.018	10.6	B
4	McDaniel at Lafayette	Two-way stop	HCM 6th Edition	SEB Left	0.005	15.2	C
5	McDaniel at Site Access	Two-way stop	HCM 6th Edition	EB Left	0.006	10.6	B

2018 AM Peak Hour Summary with McDaniel St Apts

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	McDaniel at 19th St	All-way stop	HCM 6th Edition	NB Thru	0.243	8.9	A
2	McDaniel at 18th St	Two-way stop	HCM 6th Edition	WB Thru	0.025	11.8	B
3	McDaniel at 17th St	Two-way stop	HCM 6th Edition	EB Left	0.016	10.9	B
4	McDaniel at Lafayette	Two-way stop	HCM 6th Edition	SEB Left	0.008	22.5	C
5	McDaniel at Site Access	Two-way stop	HCM 6th Edition	EB Left	0.003	10.7	B

2018 PM Peak Hour Summary with McDaniel St Apts
Figure 4 – 2018 Traffic Conditions with McDaniel St Apts

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	McDaniel at 19th St	All-way stop	HCM 6th Edition	SB Thru	0.355	9.9	A
2	McDaniel at 18th St	Two-way stop	HCM 6th Edition	EB Left	0.029	12.6	B
3	McDaniel at 17th St	Two-way stop	HCM 6th Edition	EB Left	0.025	11.3	B
4	McDaniel at Lafayette	Two-way stop	HCM 6th Edition	SEB Left	0.006	18.2	C
5	McDaniel at Site Access	Two-way stop	HCM 6th Edition	EB Left	0.007	11.2	B

2038 AM Peak Hour Summary with McDaniel St Apts

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	McDaniel at 19th St	All-way stop	HCM 6th Edition	NB Thru	0.312	9.7	A
2	McDaniel at 18th St	Two-way stop	HCM 6th Edition	EB Left	0.023	12.9	B
3	McDaniel at 17th St	Two-way stop	HCM 6th Edition	EB Left	0.024	11.7	B
4	McDaniel at Lafayette	Two-way stop	HCM 6th Edition	SEB Left	0.009	26.3	D
5	McDaniel at Site Access	Two-way stop	HCM 6th Edition	EB Left	0.004	11.3	B

2038 PM Peak Hour Summary with McDaniel St Apts
Figure 5 – 2038 Traffic Conditions with McDaniel St Apts

There will be no "significant effect" on the transportation system from changing the zoning of the parcel from M-1 to R-4. The transportation system will continue to function within City of McMinnville performance standards for the next 20 years.

Summary:

The development of the planned McDaniel St apartments will generate an estimated 15 trips in the AM Peak hour and 18 trips in the PM Peak hour. Residents of the apartments will use the streets in the City of McMinnville transportation system adding additional traffic to the system. Traffic from the apartments will affect performance metrics at the studied intersections.

All the studied intersections can handle the expected additional traffic and continue operating with generally accepted performance metrics. As traffic volumes increase through the intersections, the City should continue to monitor the performance of the studied intersections.

The transportation system will continue to function within City of McMinnville performance standards for the next 20 years.

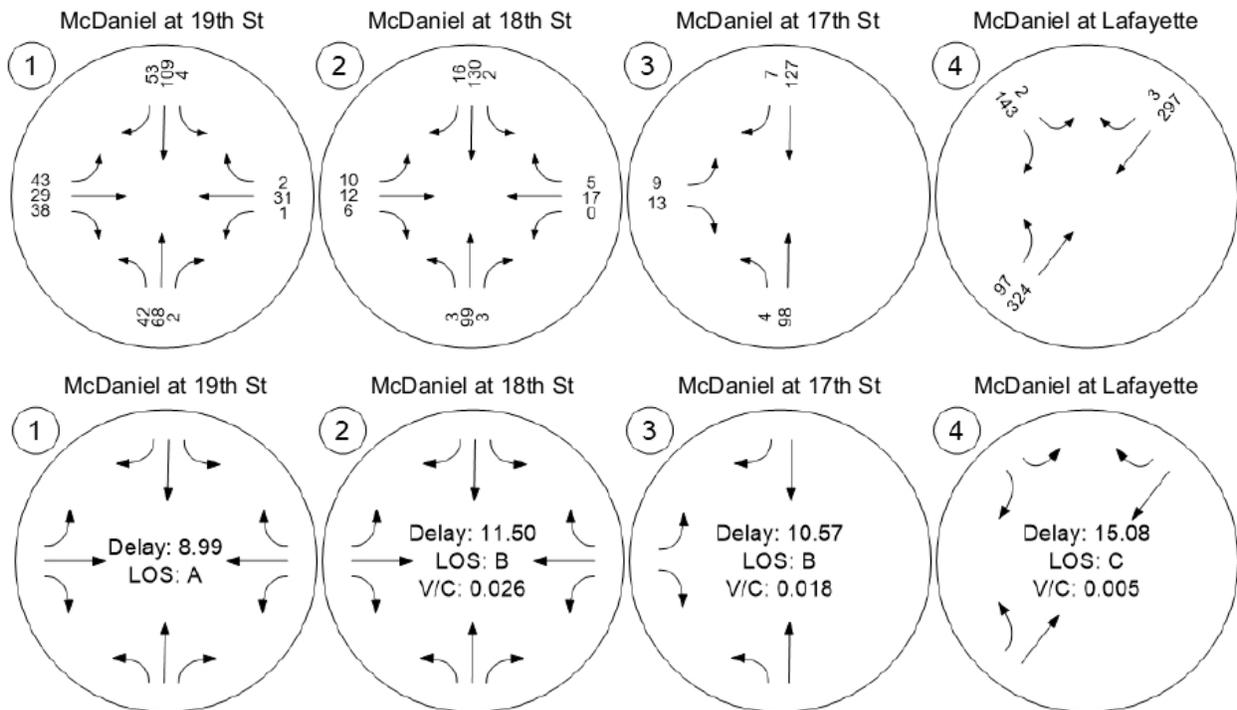


Figure 6 - Existing AM Peak hour Counts and Metrics

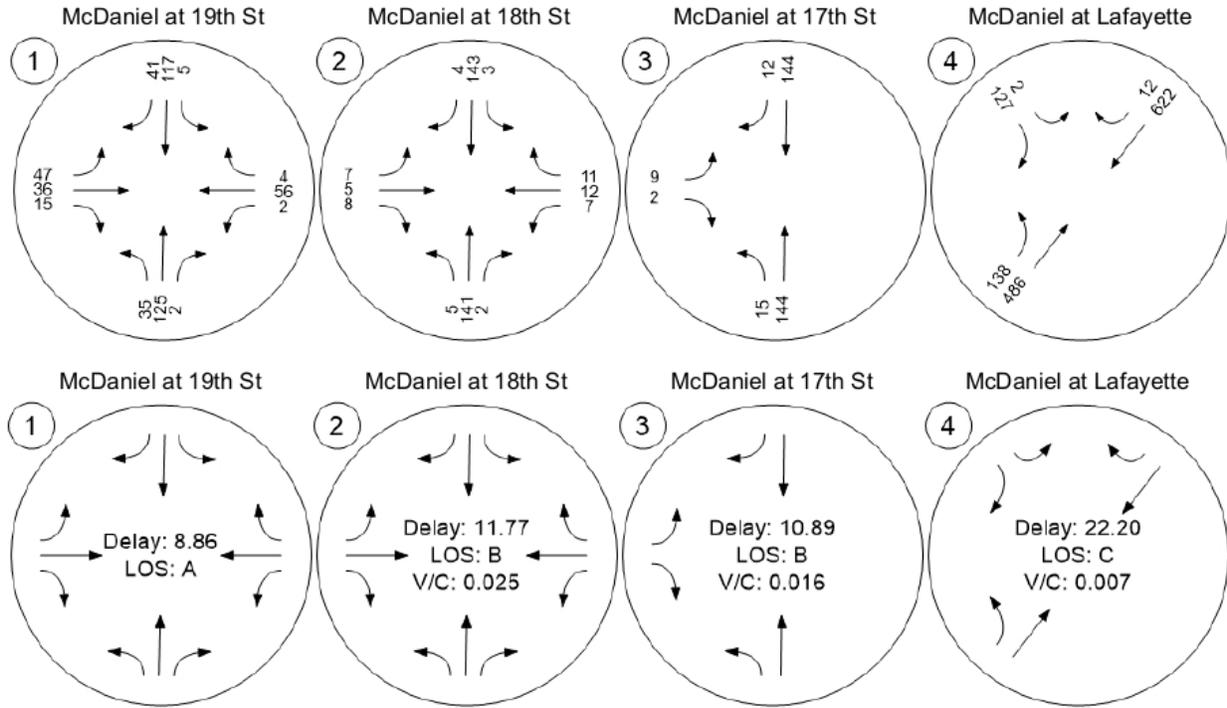


Figure 7 - Existing PM Peak hour Counts and Metrics

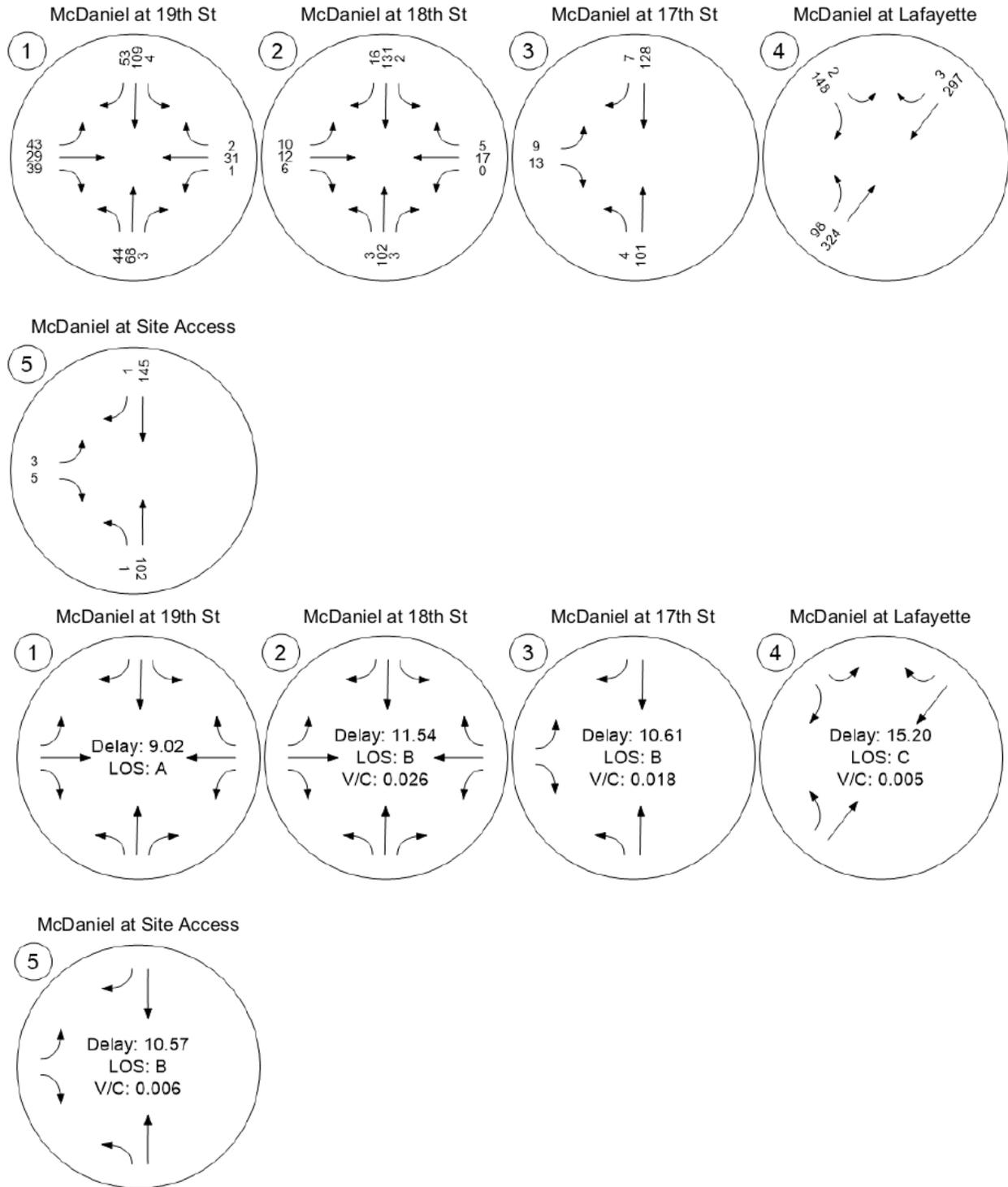


Figure 8 - 2018 AM Peak hour Counts and Metrics with McDaniel St Apts

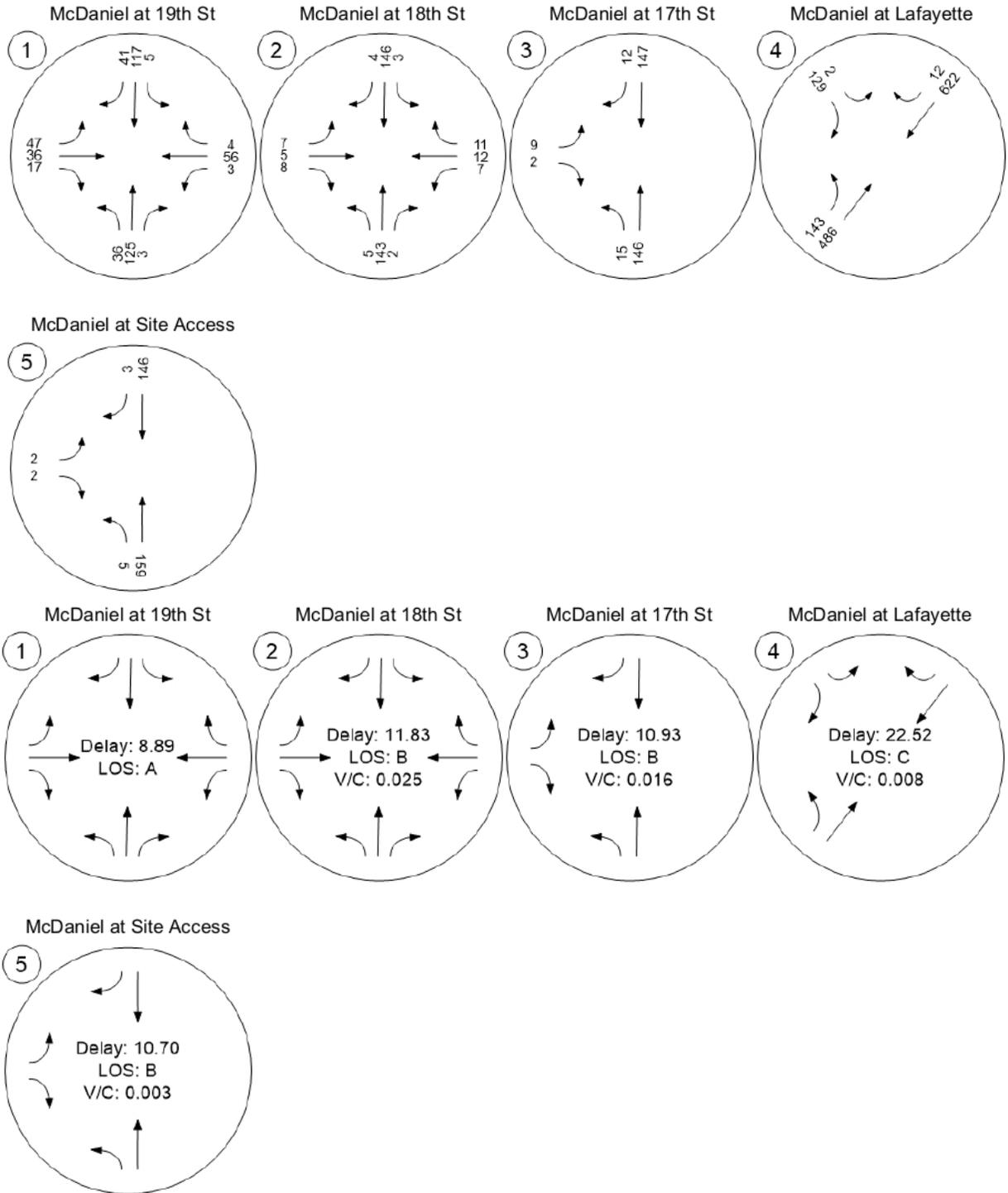


Figure 9 - 2018 PM Peak hour Counts and Metrics with McDaniel St Apts

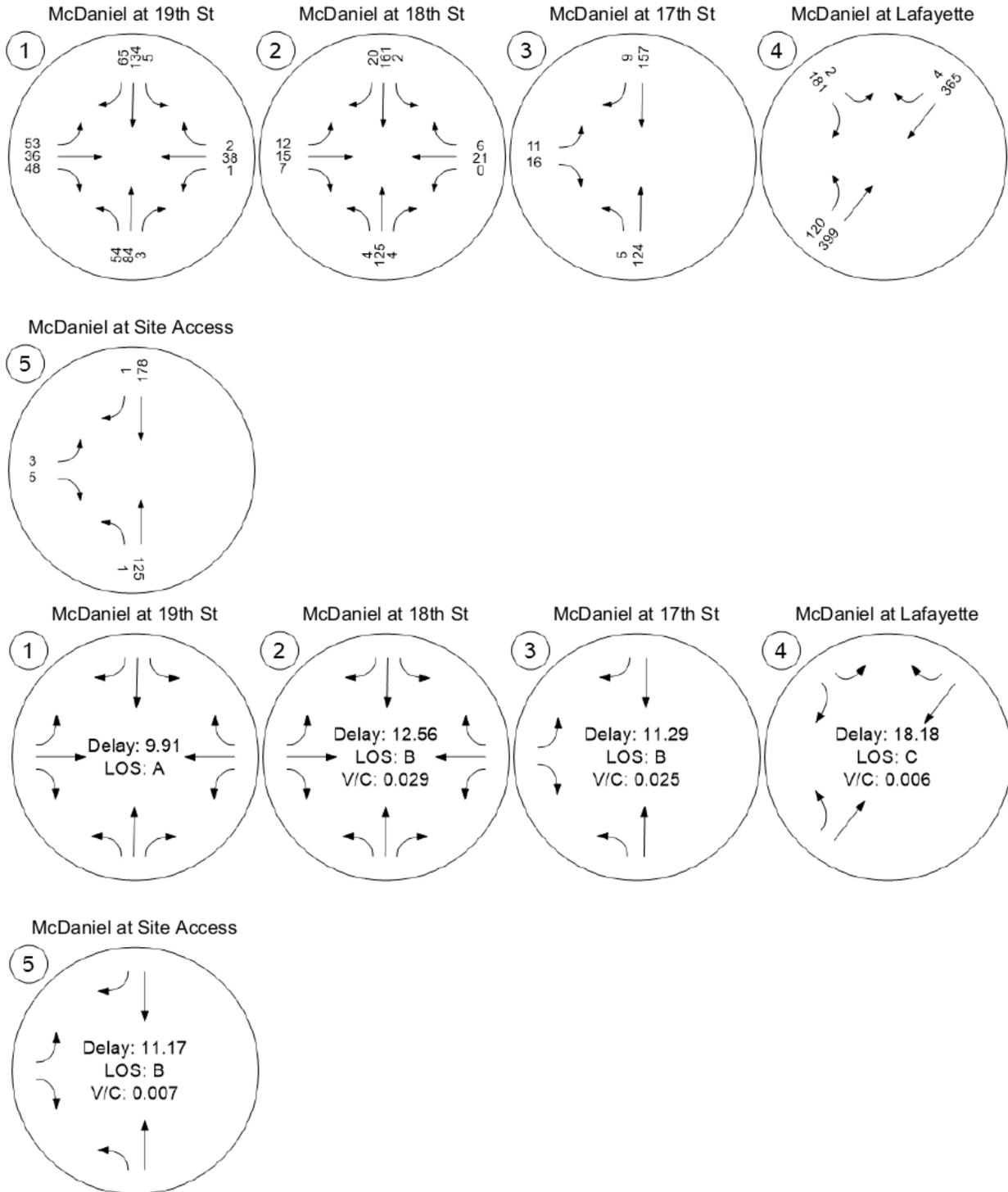


Figure 10 - 2038 AM Peak hour Counts and Metrics with McDaniel St Apts

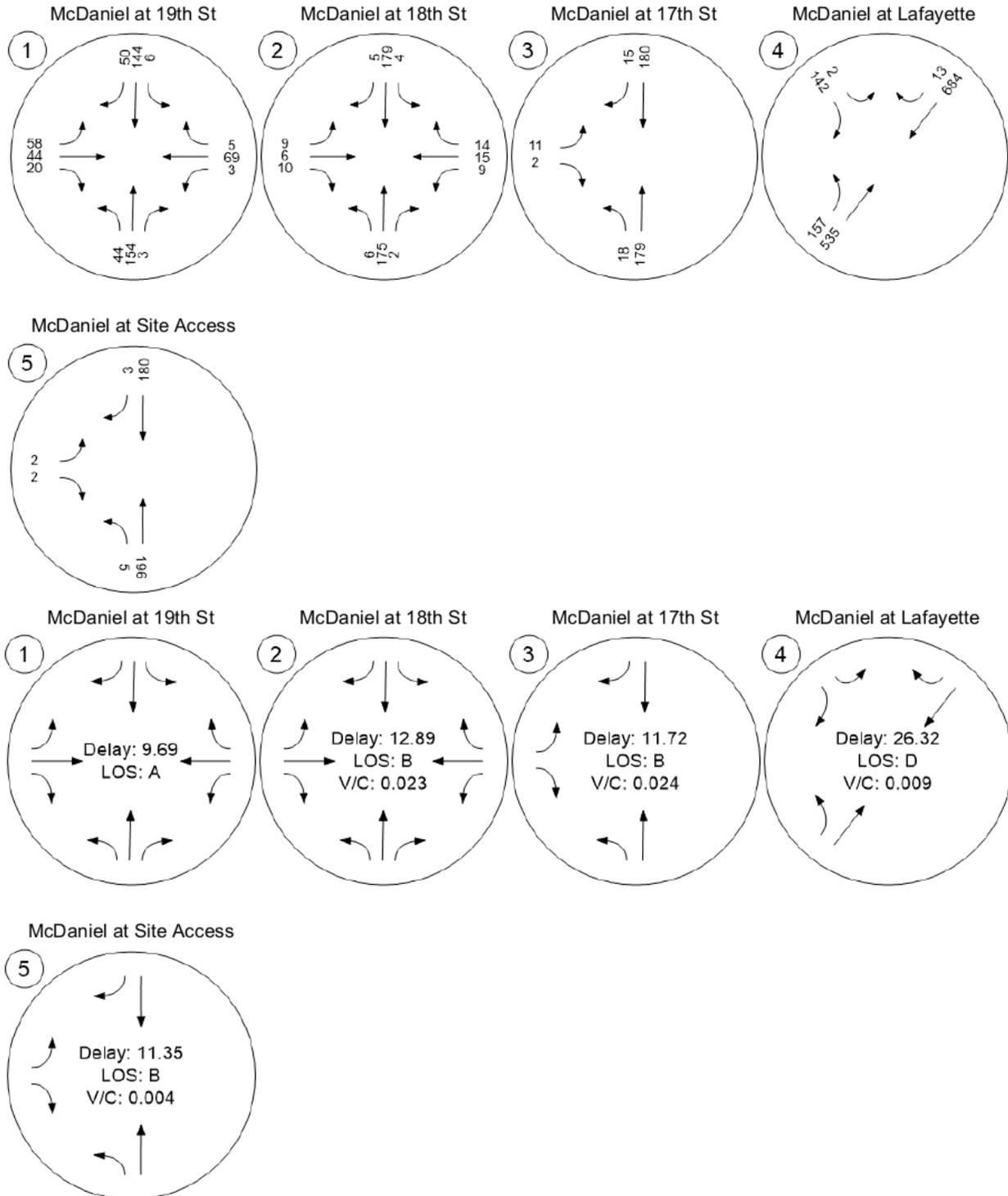


Figure 11 - 2038 PM Peak hour Counts and Metrics with McDaniel St Apts